

I claim:

1. A process of rainmaking using 'Royal Rainmaking Technology' by means of chemical seeding for cloud formation, cloud growth, rain initiation, and rain enhancement comprising steps of

5        "Triggering", to activate cloud formation and enrich newborn cloud;

      "Fattening", to promote raindrop formation and building up of cloud volume;

      "Attacking", to initiate rainfall from said cloud; and

10       "Enhancing", to enhance volume of rainfall onto said designated target area, area coverage, and to prolong rain duration.

2. A process of activating cloud formation (Triggering) as of claim 1 wherein, cloud condensation nuclei (CCN) of one or more hygroscopic chemicals are dispersed into volume of air at a level of cloud formation or  
15       a few thousand feet above said level of cloud formation or convective condensation level (CCL), at a distance upwind to said designated target area.

3. The process of claim 2 wherein said hygroscopic chemical is, preferably, sodium chloride.

20       4. A process of promoting raindrop formation and building up of cloud volume (Fattening) as of claim 1 wherein powder of exothermic-hygroscopic chemicals are dispersed into the updraft portion of clouds at a level above said cloud base.

25       5. The process of claim 4 wherein said exothermic-hygroscopic chemical is, preferably, calcium chloride.

6. A process of initiating rainfall (Attacking) as of claim 1 from warm cloud by "Sandwich Technique" wherein, first and second endothermic-hygroscopic chemicals are dispersed upwind of said cloud

shoulder and at said cloud base, respectively and simultaneously.

7. The process of claim 6 wherein said first endothermic-hygroscopic chemicals to be dispersed upwind of said cloud shoulder is, preferably, powder of sodium chloride.

5        8. The process of claim 7 wherein said second endothermic-hygroscopic chemicals to be dispersed at said cloud base is, preferably, urea.

9. A process of enhancing rainfall onto the ground (Enhancing) as of claim 1 wherein, super-cool chemical(s) are dispersed below said cloud  
10 base.

10. The process of claim 9 wherein said super-cool chemicals to be dispersed below said cloud base is, preferably, dry ice.

11. A process of initiating rainfall (Attacking) as of claim 1 from mixed phase (warm and cool) clouds by "Super Sandwich Technique"  
15 wherein, first endothermic-hygroscopic chemical(s) and second endothermic-hygroscopic chemical(s) are dispersed upwind of said cloud shoulder and at said cloud base level, respectively and simultaneously, where glaciogenic chemical(s) are seeded into the top of said cloud, and where super-cool chemical(s) are dispersed below said cloud base  
20 simultaneously.

12. The process of claim 11 wherein said first endothermic-hygroscopic chemical(s) to be dispersed upwind of said cloud shoulder is, preferably, powder of sodium chloride, said second endothermic-hygroscopic chemical(s) to be dispersed at said cloud base is, preferably,  
25 urea, said glaciogenic chemical(s) is, preferably, silver iodide flare(s) and said super-cool chemical(s) to be dispersed below said cloud base is, preferably, dry ice.

13. A process of moving cloud using 'Royal Rainmaking

Technology' by means of chemical seeding for cloud formation, cloud growth, moving of cloud, rain initiation, and rain enhancement comprising steps of

5 "Triggering", to activate cloud formation and enrich newborn cloud by dispersing CCN of hygroscopic chemicals into volume of air at or a few thousand feet above the level of cloud formation or CCL at a distance upwind of a designated target area;

"Fattening", to promote raindrop formation and building up of cloud volume by dispersing exothermic-hygroscopic chemical(s) into the updraft portion of cloud at a level above the cloud base;

"Moving" to move said cloud to a designated target area;

15 "Attacking", to initiate rainfall from said cloud by 'Sandwich Technique' using endothermic-hygroscopic chemicals dispersed upwind of said cloud shoulder and at said cloud base, or by 'Super Sandwich Technique' using endothermic-hygroscopic chemical(s) dispersed upwind of said cloud shoulder and at said cloud base level, and using glaciogenic chemical(s) seeded into the top of said cloud, and super-cool chemical(s) dispersed below said cloud base; and

20 "Enhancing", to enhance volume of rainfall onto said designated target area, area coverage, and in addition, to prolong rain duration using super-cool chemicals further dispersed below said cloud base.

14. A process of moving said cloud formed (Moving) as of claim 13, wherein exothermic-hygroscopic chemical(s) are dispersed into said cloud mass and to the spaces between the cloud masses to cause lifting up and moving of said cloud mass along the wind either to a target area on a plain or passing over a mountain top to be attacked and to fall as rain onto a target locality.

15. The process of claim 14 wherein said exothermic-hygroscopic

chemical is, preferably, calcium chloride.

16. A process of expanding rainfall against wind direction from a dense cloud resting on windward side of a mountain, using two steps of chemical seeding as of claim 13; comprising steps of :

5       fattening preexisting small clouds upwind to merge with said dense cloud mass, and

          attacking growing clouds to cause expansion of area of rainfall from said dense cloud to a designated target area upwind.

10       17. A process of rain making using Royal Rainmaking Technology as of claim 1 wherein said chemical seeding can be performed inside or outside a cloud or to the top or underneath said cloud either of an isolated cloud or any cloud band.

15       18. A process for preventing hail formation comprising steps used in “Super Sandwich Technique” of Royal Rainmaking Technology of claim 11 operating at a stage prior to formation of hail.

19. A process for providing clear view of flight path for aviation safety comprising over-seeding exothermic-hygroscopic chemical(s) into a cloud mass to cause separation of said cloud mass into a clear path.

20       20. A process to cause rainfall from stratiform clouds covering an area using chemical seeding as of claim 1 modified by dropping alternately, exothermic-hygroscopic chemicals, and endothermic-hygroscopic chemicals, to cover said clouds and dispersing hygroscopic chemicals, on top of developing clouds.